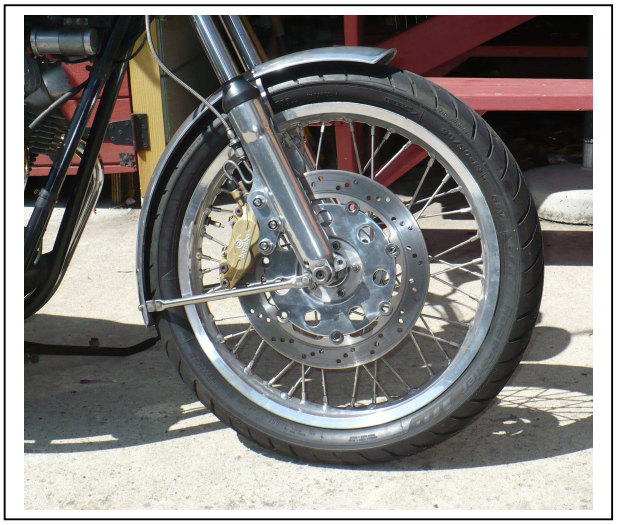
Originally printed in Alan's Wrench for Norton News 169 © Fall 2012

I've had several inquiries about the front brake upgrade I described last issue.



There are many similar off-the-shelf brake packages, and I saw at least half a dozen at the excellent INOA rally in Vermont. But they all require either a short fender or a kludged front fender brace. For those who want to make their own conversion, here are some details that might be helpful.

I've posted my caliper adapter template as a separate file, in the Tech section. It should work for any 300 mm (12 inch) rotor. You will find it won't work with the stock-diameter (10.5 inch), and for that you'll need to design your own adapter. Once you've got a rotor and caliper, mock up the adapter plate with a with a piece of thick cardboard or 1/4 inch plywood. It will take several tries to get a nice looking shape and the clearances you need.

I really like the RGM 12 inch rotor. It bolts right up and works superbly while saving un-sprung weight. Worth the $200 plus shipping. The following mainly applies to that rotor but it may be helpful if you decide to work up your own design

If you're using a 12 inch rotor, print the template file I posted, after setting the page to be 8 x 11 inches. Check the 3.80 inch O.D. dimension on the print to make sure it's right.

Make the part from standard 6061T6 alloy plate, 1/4 inch thick. After you cut out the piece, mark the hole center-to-center dimensions accurately using a caliper and sharp center punch.

Once you have all the parts on hand, mount the new rotor and install the wheel on the bike, but leave the axle nut loose. Mount the adapter to the caliper using the bottom bolt only, with a stack of washers between the adapter and the caliper, around 0.190 inch total. and hold the assembly up to the fork.

Look at the clearances and figure out how much material you will need to remove in order to get the rotor centered in the caliper slot. In my case (on a 74 850) it was just over 1/4 inch. So I took 0.130 off the inside of the fork leg and 0.120 off the top boss of the caliper. Then I added some shims (about .030") between the wheel hub and the right fork

leg to get it exactly centered. Once the caliper fits over the rotor, install the adapter middle mounting bolt through the existing lower hole in the fork leg. Now you can rotate the assembly to get the pads to be correctly aligned to the rotor working surface. Check the clearances carefully all around.

After you can get the caliper lined up with the rotor, mark where the top bolt will need to go through the tab on the fork leg. I did this from the back using a light mist of spray paint through the caliper mounting hole.

Now remove the wheel and take off the fork leg, being careful not to disturb the paint mark. If it overlaps the existing hole, you have to fill that first with a piece of aluminum rod, then mark and drill the new hole.

You'll probably have more questions if you go down this road, feel free to ask.